

## *Resource Management Consultants*

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October 7, 2009

Kathryn Hernandez  
United States Environmental Protection Agency  
Region 8      Ref: 8EPR-EP  
1595 Wynkoop St  
Denver, CO 80202

### **RE: Richardson Flat Quarterly Status Report for July through September 2009**

Dear Ms. Hernandez:

This Quarterly Status Report details site activities conducted at Richardson Flat for July through September 2009.

#### **Sampling Activities Conducted:**

Three composite samples were collected from imported soils as required by the Remedial Design/Remedial Action Work Plan (RD/RA). Composite samples were collected from onsite stockpiles. Each composite sample consisted of five subsamples. One sample was submitted to American West Analytical Laboratories. The remaining two samples were analyzed with a Field Portable X-Ray Fluorescence Meter (XRF).

Eight air monitoring samples were collected during remedial activities. Four ambient air samples were collected upwind and downwind, and four samples were collected which represented worker exposures.

Confirmation sampling was conducted in Phase 3 area B-1-W. Sample locations are presented on Figure 1. All samples were five-subsample composite samples. Twelve samples were analyzed with a Field Portable X-Ray Fluorescence Meter (XRF). Quality Assurance/Quality Control samples have been collected and will be submitted to the analytical laboratory in the upcoming quarter.

XRF screening was conducted on an as-needed basis concurrently with soil importation and remedial activities.

One opportunity surface water sample was collected from the SDD.

All sampling and analysis was conducted in accordance with the RD/RA Field Sampling Plan (RMC, 2007).

**Results:**

Air monitoring results are presented in Table 1. All upwind and downwind ambient air samples are below National Ambient Air Quality Standards. All worker exposure samples are below OSHA Action Levels and Permissible Exposure Limits.

Imported soil sample results indicate a range of Below Instrument Detection Limits (BDL) to 9.0 parts per million (ppm) for arsenic and 21 to 301 ppm for lead. The range of lead concentrations is below the Site soil PRG of 500 ppm and wetland sediment PRG of 310 ppm. Imported soil sample results are presented in Table 2.

The opportunity surface water sample collected from the SDD contained 0.16 ppm dissolved zinc, this is below the Silver Creek TMDL.

Source removal confirmation sample results are presented on Table 3. All confirmation samples are below the Site soil PRG of 500 ppm, all samples from wetland areas are below the wetland sediment PRG of 310 ppm.

Laboratory reports are available upon request.

**Other Activities:**

Remediation is being conducted in B-1-W in accordance with the Phase 3 2009 Field Construction Plan (FCP).

NRD monitoring was conducted for wildlife, macroinvertebrates and vegetation.

A total of 9,500 cubic yards of contaminated soil were transported from Park City Municipal Corporation construction projects located in the Silver Creek watershed. In addition, Athens Development Corporation delivered to Richardson Flat 16,506 cubic yards of waste material from their project at the Daly West mine site in Empire Canyon.

The pile of material at Richardson Flat designated as the rock pile was partially crushed and transported to the Montage Hotel site in Empire Canyon for use as structural fill.

**Planned Activities: October through December 2009**

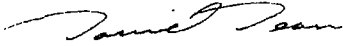
Remedial activities will continue in accordance with the FCP as weather permits.

Areas with completed remediation will be revegetated.

RMC will submit additional Field Construction Plans and Task Completion Reports as required.

If you should have any questions or comments, please contact me at 801-255-2626.

Best regards,

A handwritten signature in cursive script, appearing to read "Daniel Dean".

Daniel Dean  
RMC

Cc: Kerry Gee, Kevin Murray, Christine Cline, Muhammed Slam

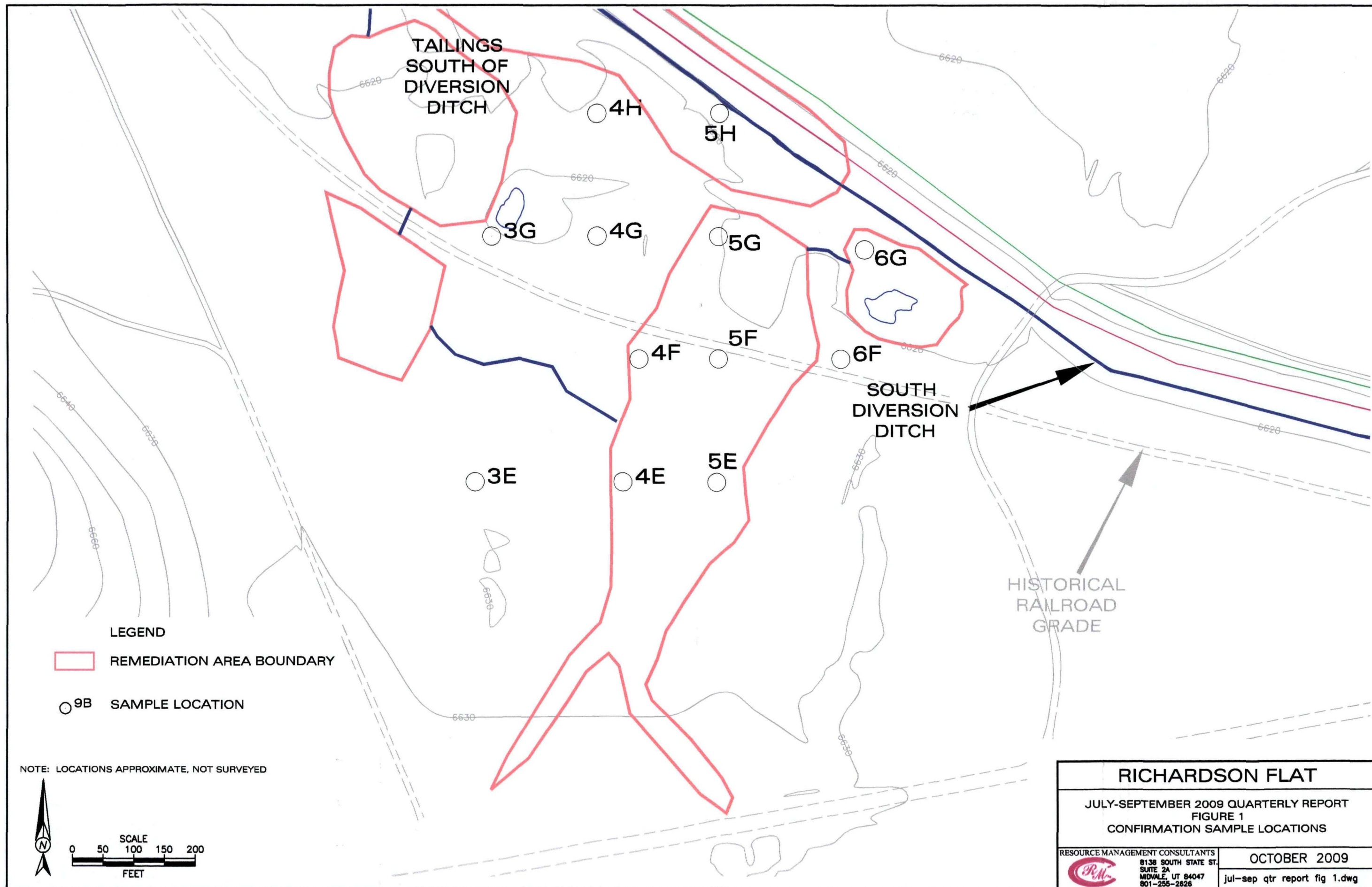
Attachments:

Figure 1 – Sample Location Map

Table 1 – Air Monitoring Results

Table 2 – Imported Soil Results

Table 3 – Confirmation Sample Results



## RICHARDSON FLAT

JULY-SEPTEMBER 2009 QUARTERLY REPORT  
FIGURE 1  
CONFIRMATION SAMPLE LOCATIONS

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OCTOBER 2009  
jul-sep qtr report fig 1.dwg

## Richardson Flat

Table 1 - Air Monitoring Sample Results

DATE	SAMPLE ID	LEAD mg/ SAMPLE	LEAD ug/m3	LEAD PEL (ug/m3)	NAAQS (ug/m3)	Air Volume L	NOTES
27-Aug-09	RF-Up	< 0.00033	< 0.564	NA	2.5	585	Upwind Sample
27-Aug-09	RF-Dn	< 0.00033	< 0.509	NA	2.5	648	Downwind Sample
27-Aug-09	RF-Hoe	0.00038	0.677	50	NA	561	Site Worker Personal Sample
27-Aug-09	RF-Am	< 0.00033	< 0.541	50	NA	610	Site Worker Personal Sample
9-Sep-09	PS-Up	< 0.00033	< 0.647	NA	2.5	510	Upwind Sample
9-Sep-09	PS-Down	< 0.00033	< 0.692	NA	2.5	477	Downwind Sample
9-Sep-09	PS-Hoe	0.0011	2.434	50	NA	452	Site Worker Personal Sample
9-Sep-09	PS-Haul Truck	< 0.00033	< 0.797	50	NA	414	Site Worker Personal Sample

### Definitions:

**PEL** - Permissible Exposure Limit. Permissible Exposure Limits are airborne concentrations of substances that workers may be exposed to by inhalation while they are at work. In theory, they represent conditions which it is believed that nearly all workers can be exposed day after day without adverse health effects.

**Action Level** - The Action Level is the exposure level at which OSHA regulations take effect. This is generally one-half of the PEL.

**NAAQS** - National Ambient Air Quality Standards. These are standards established by EPA that apply for outdoor air throughout the country.

## Richardson Flat

Table 2 - Imported Soil Confirmation Sample Results

### Laboratory

Date	Sample ID	Pb	As
14-Aug-09	CV-TS81409	21	9
	Range:	Insufficient Data	
	Mean:	Insufficient Data	

### XRF

Date	Sample ID	Pb	As
14-Aug-09	1	200	BDL
14-Aug-09	2	301	BDL
	Range:	200-301	
	Mean:	250.5	

BDL - Below instrument detection limit

All units Parts Per Million (PPM)

## Richardson Flat

Table 3 - Source Removal Confirmation Sample Results

### B-1-W

Date	Sample ID	Pb	Method
27-Aug-09	SL-5H	356	XRF
27-Aug-09	SL-4G	399	XRF
27-Aug-09	SL-4F	170	XRF
27-Aug-09	SL-5F	92	XRF
27-Aug-09	SL-4H	357	XRF
27-Aug-09	SL-4E	191	XRF
27-Aug-09	SL-3E	396	XRF
27-Aug-09	SL-3G	75	XRF
2-Sep-09	SL-6F	58	XRF
2-Sep-09	SL-5G	72	XRF
2-Sep-09	SL-6G	131	XRF
2-Sep-09	SL-5E	284	XRF
Range:		72-396	
Mean:		215.1	

All units Parts Per Million (PPM)